

Using Zero-Emission Aerial Vehicles in Support of ACE

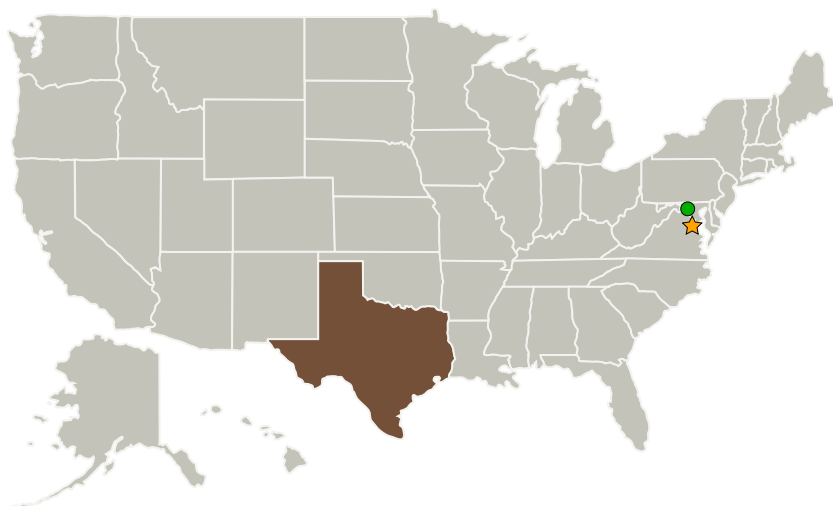
Completed Technology Project (2014 - 2015)



Project Introduction

Address a key gap in existing validation capabilities for Aerosol-Cloud-Ecosystems (ACE) by measuring the size distribution and vertical profiles in the 100m closest to the surface using a small aerial vehicle. The project will • Demonstrate feasibility of using zero emissions remote control aircraft for satellite validation • Determine if a key gap in existing validation capabilities for the ACE can be filled with this technology • Develop proper size distribution and vertical profiles of aerosols in the 100m closest to the surface for ACE mission concept

Primary U.S. Work Locations and Key Partners



ALHAT - ETD Autonomous
Landing & Hazard Avoidance
Tech Earth Science Technology
Office

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Organizations Performing Work	Role	Type	Location
★ NASA Headquarters(HQ)	Lead Organization	NASA Center	Washington, District of Columbia
● Goddard Space Flight Center(GSFC)	Supporting Organization	NASA Center	Greenbelt, Maryland
The University of Texas at Dallas	Supporting Organization	Academia	Richardson, Texas

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Primary U.S. Work Locations

Texas

Images

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ALHAT - ETD Autonomous Landing
& Hazard Avoidance Tech Earth
Science Technology Office
(<https://techport.nasa.gov/image/5126>)

Organizational
Responsibility**Responsible Mission
Directorate:**Science Mission Directorate
(SMD)**Lead Center / Facility:**

NASA Headquarters (HQ)

Responsible Program:

Earth Science

Project Management

Program Director:

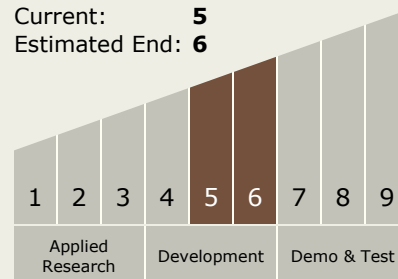
George J Komar

Principal Investigator:

David J Lary

Technology Maturity
(TRL)

Start: 5
Current: 5
Estimated End: 6



Technology Areas

Primary:*Continued on following page.*

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Technology Areas (cont.)

- TX13 Ground, Test, and Surface Systems
 - └ TX13.2 Test and Qualification
 - └ TX13.2.5 Flight and Ground Testing Methodologies

Target Destination

Earth